



بسم الله الرحمن الرحيم



MUTAH UNIVERSITY  
Deanship of Graduate Studies

جامعة مؤتة  
عمادة الدراسات العليا

### قرار إجازة رسالة جامعية

تقرر إجازة الرسالة المقدمة من الطالب غسان عدنان شرهان المرسومي والمسومة بـ :

أثر استخدام التعلم الإلكتروني في إكساب طلبة الصف السادس  
الأساسي للمفاهيم العلمية في المدارس الخاصة بمحافظة مسقط في  
سلطنة عُمان

استكمالاً لمتطلبات الحصول على درجة الماجستير في مناهج وأساليب تدريس  
العلوم قسم المناهج والتدريس

التوقيع	التاريخ	
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**Abstract**  
**The Effect of Using the Electronic Learning on Acquiring the Scientific**  
**Concepts by Sixth Year Pupils of Primary School in Muscat -**  
**Sultanate of Oman**  
**Ghassan Adnan Sharhan Almarsomi**  
**Mu'tah University, 2009**

This empirical research aims at exploring the effect of using electronic learning by sixth grade students on acquiring the scientific concepts and skills. The sample used in this research included (52) students in the sixth grade of the primary level, at Dorat Alkhaleej Private School in Muscat - Sultanate of Oman in the Academic year 2007/2008. The sample used is (9.28%) of the total (560) students in the sixth grade in that school. The sample was divided into two groups: the experimental group, with (26) students utilizing electronic learning; the other (26) students represented the control group who were taught using traditional methods.

To answer the research question, a computer program was developed using Adobe Flash and uploaded on Dorat Alkhaleej Private School website, where students can access it through the Internet. An instrument was developed using a (25) items of multiple choice questions as a pre-test and post-test of subjects. Items with loadings less than (0.25) and more than (0.7) were deleted, as well as deleting the items whose difficulty level is less than (0.25) and more than (0.8). Cronbach's alpha value was (0.88), which is considered a very good measure of the internal consistency of the instrument. After ten weeks a post-test was conducted and results indicated no significant differences between students' grades in the pre-test and the post-test for both the experimental and control groups at the 0.05 level. On the other hand, results indicated significant differences between the grades of the control group and the experimental group that used electronic learning with higher means for the experimental group at the 0.05 level. Finally, results indicated significant differences in the conceptual understanding between the two groups with the experimental group higher than the control group.

Based on the previous results, this research recommends using electronic learning in teaching science. Further recommendations and implications are stated at the end.

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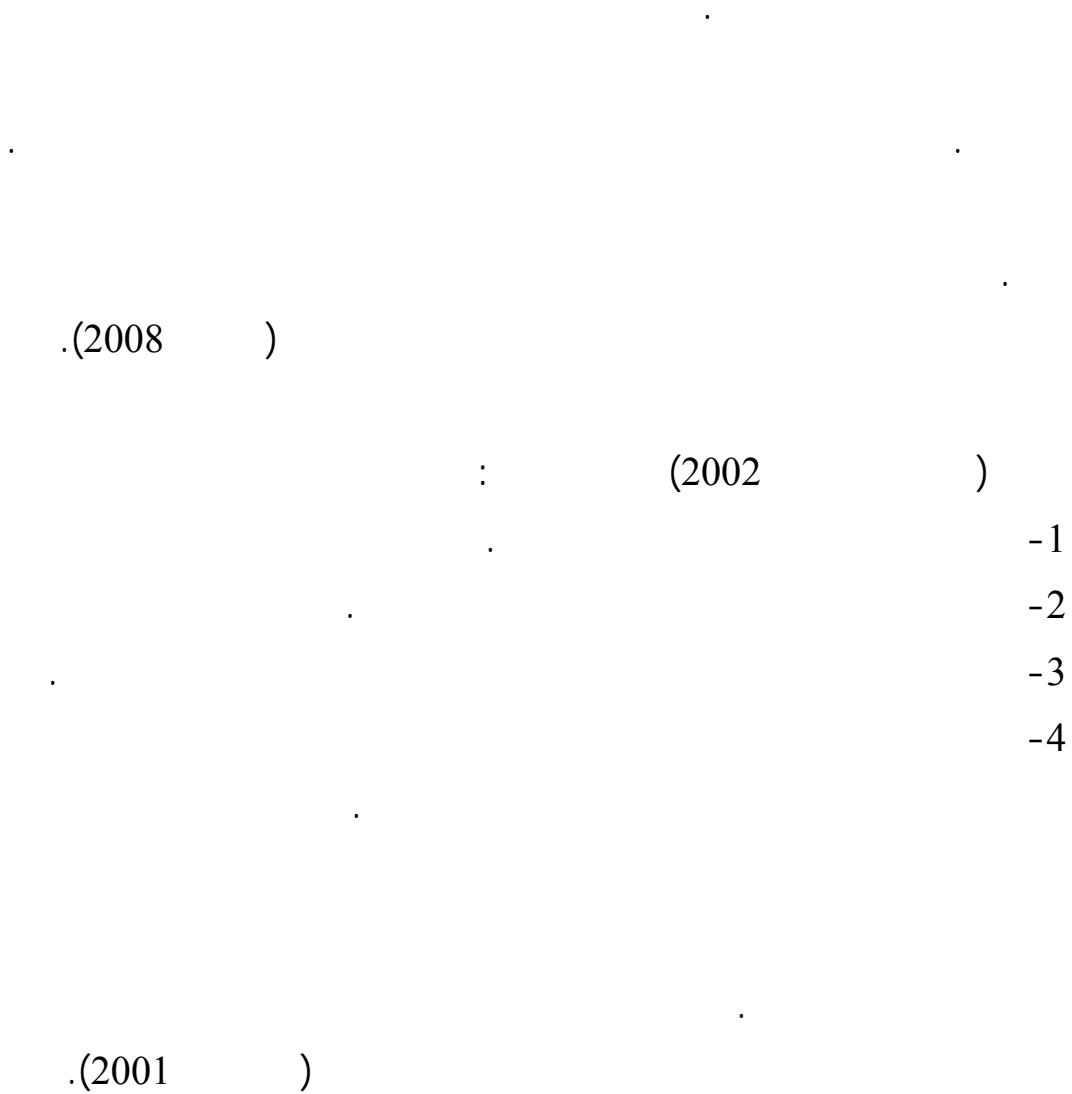
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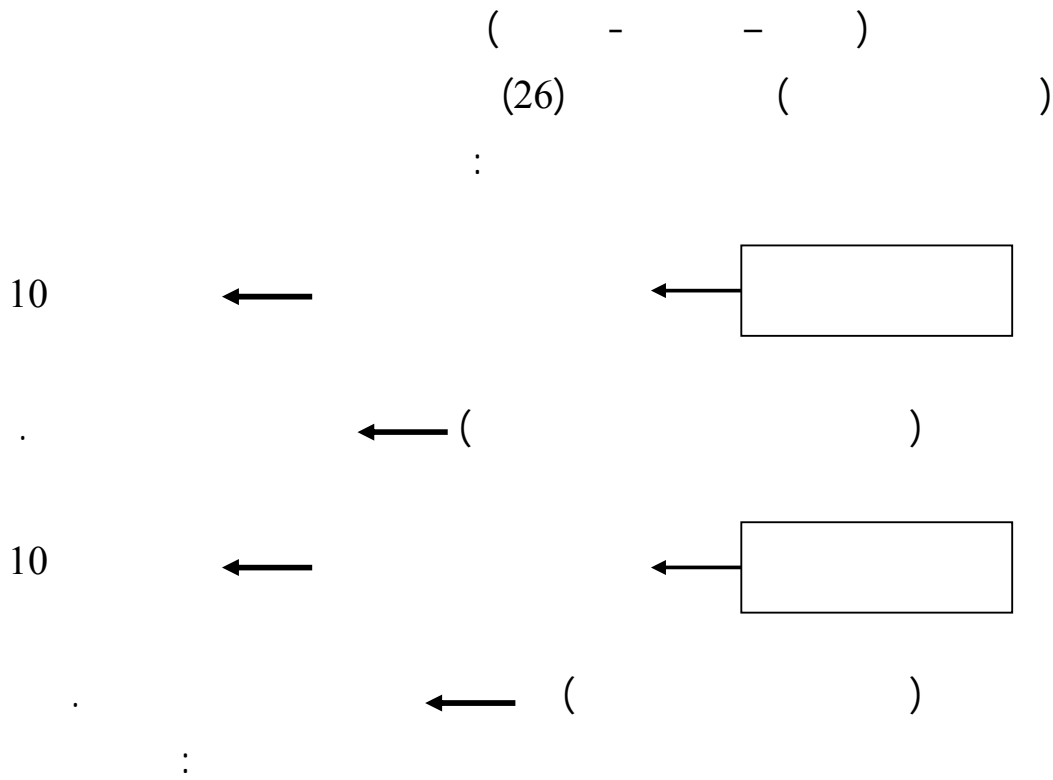
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1. One of the followings is not a pull or a push force:
  - a. Friction.
  - b. gravity.
  - c. magnet.
  - d. mass.
2. Plants grow only when:
  - a. The sun is out.
  - b. There is water.
  - c. There is light.
  - d. There is water and light.
3. The force that makes a 'Jack- in- the box' pop out of a box is known as:
  - a. frictional force.
  - b. gravitational force.
  - c. magnetic force.
  - d. elastic spring force.
4. Which of the following organisms are considered predators?
  - a. grasshopper, toad, lizard.
  - b. grasshopper, lizard, snake.
  - c. lizard, snake, toad.
  - d. spider, grasshopper, snake.
5. Forces:
  - a. can speed up an object only.
  - b. can slow down an object only.
  - c. can stop an object only.
  - d. can speed up, slow down or stop an object.
6. The force that makes an apple fall and pulls you back down when you jump is:
  - a. gravity.
  - b. elastic spring force.
  - c. frictional force.
  - d. magnetic force.
7. Plants are ..... of food and animals are .....:
  - a. consumers, producers.
  - b. producers, consumers.
  - c. producers, producers.
  - d. consumers, consumers.
8. Gravity is the force of ..... between objects that have .....:
  - a. repulsion, mass.
  - b. attraction, mass.
  - c. repulsion, weight.
  - d. attraction, weight.

- 9. The amount of gravitational force acting on an object is:**
- a. mass.
  - b. length.
  - c. capacity.
  - d. weight.
- 10. A spring changes its ..... when it is stretched or compressed:**
- a. shape and length.
  - b. length and mass.
  - c. shape and mass.
  - d. mass and weight.
- 11. Friction force is a force that:**
- a. opposes motion.
  - b. speeds up moving objects.
  - c. attracts magnetic materials.
  - d. produces light.
- 12. like poles of magnets:**
- a. repel or pull each other.
  - b. attract or pull each other.
  - c. repel or push each other.
  - d. attract or push each other.
- 13. Habitats.....:**
- a. needs to provide food only.
  - b. needs to provide shelter only.
  - c. needs to provide a place to breed.
  - d. needs to provide food, shelter and a place to breed.
- 14. Weight is a force, measured in:**
- a. Kg.
  - b. Liters.
  - c. Miles.
  - d. Newtons.
- 15. Gravity causes objects to have:**
- a. Capacity.
  - b. Weight.
  - c. Volume.
  - d. Length.
- 16. Plants convert ..... energy into ..... energy:**
- a. chemical, light.
  - b. light, chemical.
  - c. light, light.
  - e. chemical, chemical.

- 17. Magnets exert forces of attraction on magnetic materials such as:**
- a. iron and wood.
  - b. iron and steel.**
  - c. iron and plastic.
  - d. steel and wood.
- 18. All food chain begins with:**
- a. food consumers.
  - b. animals.
  - c. food producers.**
  - d. predators.
- 19. Animals which eat other animals are called:**
- a. carnivores.**
  - b. herbivores.
  - c. producers.
  - d. decomposers.
- 20. Animals which eat plants are called:**
- a. carnivores.
  - b. herbivores.**
  - c. producers.
  - d. decomposers.
- 21. One of the following is not elastic:**
- a. rubber band
  - b. modeling clay.**
  - c. spring.
  - d. both rubber band and spring.
- 22. Humans and animals bodies are made of:**
- a. the food they eat or consume
  - b. the food they produce
  - c. the food the plants produce
  - d. the food they eat or consume and the food the plants produce.**
- 23. Fertilizers are often added to soils to provide plants with.....:**
- a. nutrients.**
  - b. water.
  - c. warmth.
  - d. light.
- 24. One of the following statements is false:**
- a. Forces can make something to start to move.
  - b. Everything on Earth is subject to the force of gravity.
  - c. A force is a push or a pull on an object.
  - e. Gravity is pulls objects towards the North Pole of the Earth.**

**25. The environment is:**

- a. the earth in which most plants grow.
- b. the substances that plants and animals need to grow well.
- c. The conditions surrounding living things.
- d. the place where a population of organisms can find everything it needs to live.

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		.2006-2004	
-2002			.4
		.2004	
	.2002		.5
.2002-2001	( - )		.6
.2001-1997			.7